On page 7, lines 22-23 delete "This is applied in principle to all of the following embodiments as well".

On page 9, line 20 delete "showed minor" and insert "disclosed some".

In the Claims

Please cancel claims 1 to 7

Please insert new claims 8 to 19 as follows:

8. A saw blade for cutting steel-reinforced structures comprising a steel disk (10) including an opening (11) at the center for connection with a shaft of a motor-driven tool and particulate bearing layer on both side surfaces of the steel disk, in which the particulate bearing layer made of one or more particle materials selected from the group consisting of diamond, CBN, Al_2O_3, Zr_2O_3, ZrO_2, WC or SiC or made from their mixture among them having ring portions with a fixed width and positioned in the central area on both side surfaces of the steel disk, and a plurality of streamlined wings extending from the ring portions to the periphery of the steel disk, the streamlined wings are formed on both side surfaces of the steel disk so that first streamlined wings attached on one side surface of the steel disk are overlapped with second streamlined wings attached on the other side surface; surface of the circular steel disk are radially overlapped in position with the wings on the other side surface of the circular steel disk and cutting segments attached onto the periphery of the steel disk with predetermined intervals.

9. The saw blade as claimed in claim 8, wherein the first streamlined wings (22) on one side surface of the circular steel disk are overlapped in a full and aligned manner with the second streamlined wings on the other side surface of the circular steel disk.

10. The saw blade as claimed in claim 9, wherein both arcs are defined as each of the streamlined wings has the same or different radius of curvature of which center is different in order to form a helical shape with respect to the opening, and the streamlined wings are so shaped as to get wider gradually in proportion to the radius of the steel disk that increases from the ring portion to the outer periphery of the circular steel disk.

11. The saw blade as claimed in claim 9, wherein the steel disk comprising a plurality of slits on its outer periphery at predetermined intervals which are

between the cutting segments.

12. The saw blade as claimed in claim 9, wherein the cutting segments are turbo-type defined as planar jig-jag profiles with respect to on both side surfaces of the cutting segments.

13. The saw blade as claimed in claim 9, wherein the portions of the streamlined wings overlapped in position on both side surfaces of the steel disk are formed with one or more through-holes.

14. The saw blade as claimed in claim 13, wherein a diameter of the plural through-holes formed on the streamlined wings of particulate bearing layers increase the ring portion to the periphery of the steel disk.

15. The saw blade as claimed in claim 8, wherein both arcs are defined as each of the streamlined wings has the same or different radius of curvature of which center is different in order to form a helical shape with respect to the opening, and the streamlined wings are so shaped as to get wider gradually according as the radius of the steel disk increases from the ring portion to the outer periphery of the circular steel disk.

16. The saw blade as claimed in claim 8, wherein the steel disk comprising a plurality of slits on its outer periphery at predetermined intervals, which are between the cutting segments.

17. The saw blade as claimed in claim 8, wherein the cutting segments are turbo-type defined as planar jig-jag profiles with respect to on both side surfaces of the cutting segments.

18. The saw blade as claimed in claim 8, wherein the portions of the streamlined wings overlapped in position on both side surfaces of the steel disk are formed with one or more through-holes.

19. The saw blade as claimed in claim 8, wherein a diameter of the plural through-holes formed on the streamlined wings of particulate bearing layers increase according as the radius of the steel disk from the ring portion to the periphery of the steel disk.

In the Abstract

Please delete the abstract and insert new and revised abstract as follows:

A saw blade for cutting steel-reinforced structures comprising a steel disk having and opening at the center for connection with a shaft of a motor-driven tool and

Figure 4 shows the plan view of a saw blade according to the fourth embodiment of the present invention, and

Figure 5 shows a perspective view of cutting segements mounted on a saw blade in partially cut-off manner.

DETAILED DESCRIPTION OF THE INVENTION

Some preferred embodiments of the present invention will be described in detail below with regard to the attached drawings.

As shown in Figure 1, which shows the plan view of the saw blade according to the first embodiment of the invention, the steel disk of a saw blade for use ~~for~~ cutting stones or construction materials is attached on its both side surface with one or more kinds of particles selected from the group consisting of diamond, CBN, Al_2O_3, Zr_2O_3, WC, ZrO_2 and SiC by means of the process of electroplating or plasma spray coating.

The saw blade is provided with particulate bearing layers 20 which are attached on both sides of a circular steel disk 10. The circular steel disk 10 has an opening 11 at its center for connection with the shaft of a motor-operated tool and the circular steel disk is attached on its periphery with cutting segments 12 at predetermined intervals, with slits 13 formed between them. And the particulate bearing layer has a continuous ring 21 with a fixed with and located near the center of the steel

Here, the above-described wings 22 are formed in such a manner that the both circular arcs $22r_1$ and $22r_2$ extending substantially radially and defining each wing 22 have either the same or different radius of curvature but have the different positions of the center of curvature, with the width between the two arcs increasing with the radial distance from the center of the disk, so that the wings 22 have gradually increasing lateral local area or circumferential width as they approach the outer periphery portions of the steel disk located between adjacent wings 22 or the uncovered portions are also similarly shaped, that is, their local lateral area increases as they get far from the center of the steel disk. This first embodiment is characterized in that the wings of a particulate bearing layer on one face of the circular steel disk are correspondingly overlapped with the wings on the other face of the disk in position in a full and aligned manner.

The wings have the same shape and size and are arranged uniformly over the circumferential surface between the inner ring 21 and the outer periphery of the steel disk 10.

On the other hand, as shown in Figure 2, which shows the plan view of the saw blade according to the second embodiment of the invention, the saw blade in this embodiment is just the same as in the first embodiment except that the wings 22 of the particulate bearing layer 20 attached on both side surfaces of the steel disk in full overlapped position are formed with one or more through-holes 22H. In Figure 2, it is seen that each wing 22 is formed with 3 through-holes 22H with different

the both sides, as shown in Figure 5, is preferable, because the fine cut chips or powders which emerged from the passages between the adjacent wings 22 of a particulate bearing layer 20 can be discharged smoothly by virtue of irregularities formed on the both sides of segments.

On the other hand, the following comparative test by the present applicant would demonstrate the performance of the present invention.

A sandwich-type saw blade consisting of circular steel disks with an intermediate copper plate, a saw blade made of an ordinary steel circular disk and a saw blade made of an ordinary steel circular disk but attached with SiC particles having the particle size of #14 on the both sides of the disk to form particulate bearing layers as in Figure 1 of the invention, all disks having the diameter of 14 inches, were subjected to the test for the deformation of disks and the cutting velocity.

As the result of tests, the sandwich-type saw blade disclosed some wobbling phenomena and the ordinary steel saw blade showed intense wobbling phenomena.

On the other hand, the saw blade with SiC particulate bearing layers according to the invention showed no deformation on the steel disk and moreover the increase in cutting velocity by about 20% over the others.

The particulate bearing layers attached on both surfaces of the steel disk according to the first embodiment of the invention include wing sections in helical form at fixed intervals along the circumference of the disk to be suited to the direction of rotation, which wing sections are positioned in full overlapped relation on both surfaces of

the steel disk.

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